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# RECORDS PERTAINING TO LIFE HISTORY AND HABITS OF DENDROCTONUS PSEUDOTSUGAE

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ASHLAND, OREGON
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RECORDS PERTAINING TO

LIFE HISTORY AND HABITS

OF

Patterson

DENDROCTONUS PSEUDOTSUGAE.

The Douglas fir beetle has not been observed to attack and kill healthy green Douglas fir at any time during the period that observations have been kept at Ashland, Oregon. It is fairly common in windfalls and scarcely a freshly windfallen log can be found during the summer that is not infested by this beetle. It may also occur in fire weakened trees or those killed by other insects. Because of its minor importance it has been studied only in an incidental way but several series of records have been kept which show the number of annual generations:

Hopk. 14204a - Ashland, Oregon. May 4, 1915.
A freshly attacked windfallen tree found on this date:

| 1915 | Parent adults Attack | Eggs | Larvae | Pupae | New adults | Emergence | |
|---|---|---|---|---|---|---|---|
| May 4 | " | | | | | | |
| " 8 | " | " | | | | | |
| " 14 | " | " | " | | | | |
| " 21 | " | " | " | | | | |
| " 28 | " | " | " | | | | |
| June 2 | " | " | " | | | | |
| 5 | " | " | " | | | | |
| 7 | " | " | " | | | | (Note A) |
| 12 | " | " | " | | | | " A) |
| 16 | " | " | " | | | | (Note B) |
| 19 | " | " | " | | | | |
| 22 | " | " | " | | | | |
| 26 | " | " | " | | | | |
| July 1 | " | " | " | | | | |
| 9 | | | " | | | | (Note C) |
| 12 | | | " | | | | |
| 19 | | | " | " | | | |
| Aug. 21 | | | | " | " | | |
| Oct. 2 | | | | | " | | (Note D) |
| 1916 | | | | | | | |
| Feb. 16 | | | | | " | | (Note E) |
| Mar. 17 | | | | | " | | (Note F) |
| " 30 | | | | | " | | |
| Apr. 6 | | | | | " | | |
| " 29 | | | | | | " | (Note G) |
| May 6 | | | | | | " all out. | |

Hopk. 14204a Notes.

Note A - Parent adults still cutting galleries and depositing eggs.

Note B -Parent adults still cutting galleries and depositing eggs. Apparently no recent attack by flying beetles. Would appear as though egg depositing period is prolonged. No larvae reached as yet maximum stage.

Note C - Greater part of brood in maximum larvae atage. While some have not reached this stage some have passed it, thus we have all stages of larvae.

Note D - This brood consisting of maximum adults still in log. Will apparently pass overwinter in this log.

Note E - Found new adults still under bark of log. No emergence of new adults.

Note F - New adults still in tree. A few seem to be boring out. Parent adults missing.

Note G - Most all out few on under side of logg 3/4 out.

Unnumbered Lot. Log #1 Dendroctonus pseudotsugae.

A freshly attacked windfallen tree found near Siskiyou, Ore. May 6, 1916.

| 1916 | Parent adults Attack, | Eggs, | Larvae, | Pupae, | New adults, | Emergence. |
|---|---|---|---|---|---|---|
| May 6 | " | | | | | |
| 9 | " | " | | | | |
| 26 | | " | | | | |
| June 1 | | " | | | | |
| " 8 | | " | | | | |
| " 15 | | | " | | | |
| " 23 | | | " | | | |
| July 7 | | | " | | | |
| " 14 | | | " | | | |
| " 22 | | | " | | | |
| " 29 | | | " | | | (Small to grown) |
| Aug. 8 | | | " | | | " " " |
| " 19 | | | " | | | |
| Sept. 5 | | | | " | | |
| " 20 | | | | " | " | |

Unnumbered Lot. Log #2

A freshly attacked windfallen tree found near Siskiyou, Ore. May 6, 1916.

| 1916 | Parent adults. Attack. | Eggs. | Larvae. | Pupae. | New Adults. | Emergence. |
|---|---|---|---|---|---|---|
| May 6 | " | | | | | |
| 9 | " | " | | | | |
| 26 | " | " | | | | |
| June 1 | | " | | | | |
| 8 | | " | | | | |
| 15 | | | " | | | |
| 23 | | | " | | | |
| July 7 | | | " | | | |
| " 14 | | | " | | | |
| " 22 | | | " | | | |
| " 29 | | | " | | | (Small to full grown) |
| Aug. 8 | | | " | | | " " " |
| " 19 | | | " | | | |
| Sept.5 | | | | " | | |
| " 20 | | | | " | " | |
| Oct. 5 | | | | | " | |
| " 24 | | | | | " | |

14247a - Ashland, Oregon, May 4, 1915. Elev. 2800 Feet. Windblown tree fell in February 1915.
May 4, 1915; Parent adults attacking trunk of tree.
Aug. 21, 1915; New adults fully formed.
Mar. 17, 1916; Adults hibernating in cell in inner bark.

These records show that the Douglas fir beetle differs distinctly in its habits from the other Dendroctonus beetles in this locality. The number of generations of the western pine beetle and the mountain pine beetle depend upon the length of the season, and new adults will emerge in the fall and start a second or partial second and even a partial third generation. New adults of the Douglas fir beetle however do not emerge in the fall but pass through the first winter before emerging.

The records conform to the life history data in Bulletin 83, with the exception that we have not records for the following " a few of the more advanced broods may emerge during September and October and deposit eggs for the second generation during September and October."

This may be due to the fact local conditions at Ashland do not favor this late activity, or, what is more probable, that our records have not been intensive enough to bring to light this activity what at the most constitutes a very small proportion of the brood.

Assistant Forest Entomologist.

Ashland, Oregon.
February, 1918.